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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/955,004	09/17/2001	Ming Chi Chen	CSN 4702	7879

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EXAMINER

MCLEAN MAYO, KIMBERLY N

ART UNIT	PAPER NUMBER
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2187

DATE MAILED: 12/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/955,004	Applicant(s) CHEN ET AL.	
	Examiner Kimberly N. McLean-Mayo	Art Unit 2187	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 September 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9,12,13,16 and 17 is/are rejected.
- 7) ☒ Claim(s) 10,11,14 and 15 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 September 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>12/9/04</u> . | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

1. The enclosed detailed action is in response to the Application submitted on September 17, 2001.

Claim Rejections - 35 USC § 112

2. Claim 5 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 5 recites a legacy low-bandwidth parallel bus coupling the serial interface of the host and daughtercard. It is not understood what is meant by coupling the serial interface of the host and daughtercard. The specification and the drawings illustrate a serial bus coupling the serial interface of the host and the daughtercard.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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4. Claim 1 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Bass et al. (USPN: 6,029,155).

Regarding claim 1, Bass discloses a serial link coupling serial ports on the first and second devices (Figure 1, interface between References 110 and 120-124; C 5, 63-67; C 6, L 1-5; Figure 2b, Reference 220 – interface between serial port coupled to 220 and any of the peripheral devices [Fig. 1, Refs. 120-124]); a serial communication controller for implementing a clear channel for transmitting and receiving serial data (Figure 2b, Reference 220); a first controller programmed to implement a first messaging protocol for responding to messages from the second device and for sending messages including memory write, memory read and open/close virtual channel connection messages (Figure 2b, Reference 210; C 6, L 18-30); on the second device, a second controller programmed to implement a second messaging protocol responding to messages from the first device and for sending messages forwarding designated data types [such as weight readings] to the first device (logic within the peripheral device which interprets and processes the commands received from the host).

Regarding claim 12, Regarding claim 12, Bass discloses a high bandwidth serial link coupling the host and daughtercard (Figure 1, interface between References 110 and 120-124; C 5, 63-67; C 6, L 1-5; Figure 2b, Reference 220 – interface between serial port coupled to 220 and any of the peripheral devices [Fig. 1, Refs. 120-124]); on the host, a host serial controller for transmitting and receiving data over the serial links (Figure 2b, Reference 220); a host processor programmed to implement a serial messaging protocol for enabling daughtercard management operations (read/write) to be performed by the host utilizing the serial link (Figure 2b, Reference

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210; C 6, L 18-30); on the daughtercard a daughtercard serial interface for transmitting and receiving data over the serial link (interface connected to the serial interface of Reference 220 in Figure 2b); a daughtercard protocol controller programmed to implement a serial protocol command to provide information required by the host to manage the daughtercard (logic within the peripheral device which interprets and processes the commands received from the host).

5. Claims 6-7, 8, 13 and 17 are rejected under 35 U.S.C. 102(e) as being anticipated by Howard (PGPUB: US 2002/0078244).

Regarding claim 6, Howard discloses on a first device transmitting a read memory command to the second device to request data stored on the memory of the second device, transmitting a read memory command with data to be stored in the memory of the second device, transmitting control information to the second device (Section 0036-0037); on a second device, transmitting formatted data to the first device (Section 0037, last two lines).

Regarding claim 7, Howard discloses including a data structure in a write command to control the functionality of the second device (section 0049).

Regarding claims 8, 13 and 17, Howard discloses providing a serial link between the host and daughtercard (Figure 1, Reference 20; Section 0025, Lines 6-8; Section 0044, Lines 7-9); defining a plurality of serial protocol commands forming a serial protocol enabling daughtercard management operations to be performed utilizing the serial link (the commands are defined by programming the hardware to execute certain command for certain functions; all command

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operated hardware is controlled by software/device drivers which program the commands); specifying a command encapsulation format to encode the plurality of commands to implement the serial protocol (Figure 3; the organization of the command and embedded information, for example read/write, <file id>, <key>, this is the format for the read and write command encapsulating the file id and key).

6. Claims 8-9, 13-14 and 17 are rejected under 35 U.S.C. 102(e) as being anticipated by Wang (USPN: 6,553,441).

Regarding claims 8, 13 and 17, Wang discloses providing a serial link between the host and daughtercard (Figure 1, Reference 103); defining a plurality of serial protocol commands forming a serial protocol enabling daughtercard management operations to be performed utilizing the serial link (C 3, L 40-43); specifying a command encapsulation format to encode the plurality of commands to implement the serial protocol (C 3, L 43-60).

Regarding claims 9 and 14, Wang discloses defining memory management serial protocol commands for enabling the host to manage memory on-board the daughtercard (C 3, L 46-60) and defining dependent serial protocol commands for initializing and/or change the configuration of the daughtercard (C 2, L 60-64; the daughtercard is initialized and changes when the registers are set up to enable certain functions)

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 2-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bass (USPN: 6,029,155).

Regarding claim 2, Bass discloses a high bandwidth serial link coupling the host and daughtercard (Figure 1, interface between References 110 and 120-124; C 5, 63-67; C 6, L 1-5; Figure 2b, Reference 220 – interface between serial port coupled to 220 and any of the peripheral devices [Fig. 1, Refs. 120-124]); a host serial controller for transmitting and receiving data over the serial links (Figure 2b, Reference 220); a host processor programmed to implement a serial messaging protocol for transmitting commands and data to the daughtercard over the serial link including a write memory command that writes data to the memory on the daughtercard and a read memory command that identifies data to be read from the memory on the daughtercard (Figure 2b, Reference 210; C 6, L 18-30); on the daughtercard a daughtercard serial interface for transmitting and receiving data over the serial link (interface connected to the serial interface of Reference 220 in Figure 2b); a daughtercard protocol controller programmed to implement a serial messaging protocol to respond to commands received from the host, including responding to memory read and write commands and for forwarding formatted data received from the peripheral to the host (logic within the peripheral device which interprets and processes the commands received from the host). Bass does not explicitly disclose forwarding data received

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from a network to the host. Bass teaches an interfacing system to peripheral devices. A network card is a peripheral device. It is well known in the art to interface a host system to a network interface for receiving formatted data from the network for allowing the host to access exchange data with other systems on the network. Thus it would have been obvious to one of ordinary skill in the art to use a network card in Bass' system wherein the host received formatted data from the network for the desirable purpose of data sharing and efficient information exchange.

Regarding claim 3, Bass does not disclose implementing the controller as a FPGA. However, it is well known in the art to configure controllers using FPGAs because FPGAs allow easy prototyping and testing since the device can be reprogrammed fairly easily. Hence, it would have been obvious to one of ordinary skill in the art to implement the Bass' controller as a FPGA for the desirable purpose of efficient prototyping.

Regarding claim 4, Bass does not disclose implementing the controller as an ASIC. However, it is well known in the art to configure controllers using ASICs because ASICs allow low powered system design. Hence, it would have been obvious to one of ordinary skill in the art to implement the Bass' controller as an ASIC for the desirable purpose of power efficiency.

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Allowable Subject Matter

9. Claims 10-11 and 14-15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kimberly N. McLean-Mayo whose telephone number is 703-308-9592. The examiner can normally be reached on M (10:00 - 6:30); Tues, Thr (10:00 - 4:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Donald Sparks can be reached on 703-308-1756. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KIMBERLY MCLEAN-MAYO
PRIMARY EXAMINER

Kimberly N. McLean-Mayo
Examiner
Art Unit 2187

KNM

December 9, 2004

